NORTEL NETWORKS™

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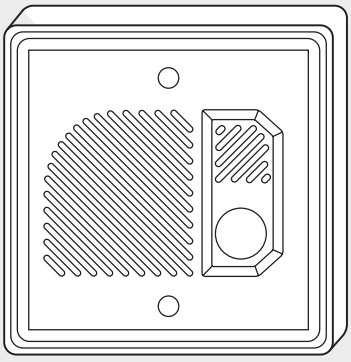
BST Doorphone

Installation and Configuration Guide

for Business Communication Manager systems with version 3.6 software or higher



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Chapter 1
About the Business Series Terminal (BST) Doorphone

This guide leads a Nortel Networks installer and/or system administrator through installing and configuring a BST Doorphone on a Business Communications Manager system.

The BST Doorphone is used as an intercom device to control access to your building. It provides call notification and handsfree communication from a site entry location to assigned telephones on the Business Communications Manager system.

Note: Door opening capabilities are available with a Door Opening Controller (DOC). For more information on DOC, refer to Optional Equipment on page 15.

This chapter contains:

- What you need to know
- Environment requirements
- How to get help

What you need to know

To install and configure a BST Doorphone you must:

- know how to log on to Unified Manager and use the Unified Manager interface. Refer to the *Business Communications Manager Programming Operations Guide* for more information.
- be a Nortel Networks installer with Business Communications Manager certification
- know basic Nortel Networks terminology

Environment requirements

Check the following environment requirements:

Temperature	-35° to 60°C (31° – 140°F)
Relative humidity	5% to 95% non-condensing
Background noise	up to 70 dB A

How to get help

USA and Canada

Authorized Distributors - ITAS Technical Support

Telephone:
1-800-4NORTEL (1-800-466-7835)
If you already have a PIN Code, you can enter Express Routing Code (ERC) 196#.
If you do not yet have a PIN Code, or for general questions and first line support, you can enter ERC 338#.

Website:
http://www.nortelnetworks.com/support

Presales Support (CSAN)

Telephone:
1-800-4NORTEL (1-800-466-7835)
Use Express Routing Code (ERC) 1063#

EMEA (Europe, Middle East, Africa)

Technical Support - CTAS

Telephone:

* European Freephone	00800 800 89009
European Alternative/ United Kingdom	+44 (0)870-907-9009
Africa	+27-11-808-4000
Israel	800-945-9779

* Note: Calls are not free from all countries in Europe, Middle East or Africa

Fax:
44-191-555-7980

email:
emeahelp@nortelnetworks.com

CALA (Caribbean & Latin America)

Technical Support - CTAS

Telephone:
1-954-858-7777

email:
csrmgmt@nortelnetworks.com

APAC (Asia Pacific)

Technical Support - CTAS

Telephone:
+61 388664627

Fax:
+61 388664644

email:
asia_support@nortelnetworks.com

Chapter 2
DN configuration requirements for the BST Doorphone

This chapter describes how to set up a DN record for a BST Doorphone prior to a hardware installation.

Before installing a BST Doorphone, you must select and configure an Inactive DN (vacant port) on the Business Communications Manager system for BST Doorphone compatibility.

Note: Some default DN settings can cause the BST Doorphone to automatically answer incoming calls that are not intended to be heard over the BST Doorphone.

Creating a BST Doorphone DN record

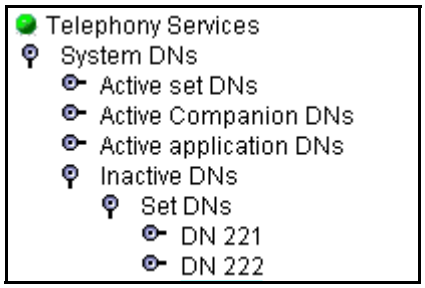
Follow these steps to create a DN record for the BST Doorphone.

1 From Unified Manager, click on the keys beside **Services**, **Telephony Services**, **System DNs**, and **Inactive DNs**.

Figure 1 Inactive screen example

2 Click on the key beside **Set DNs**.

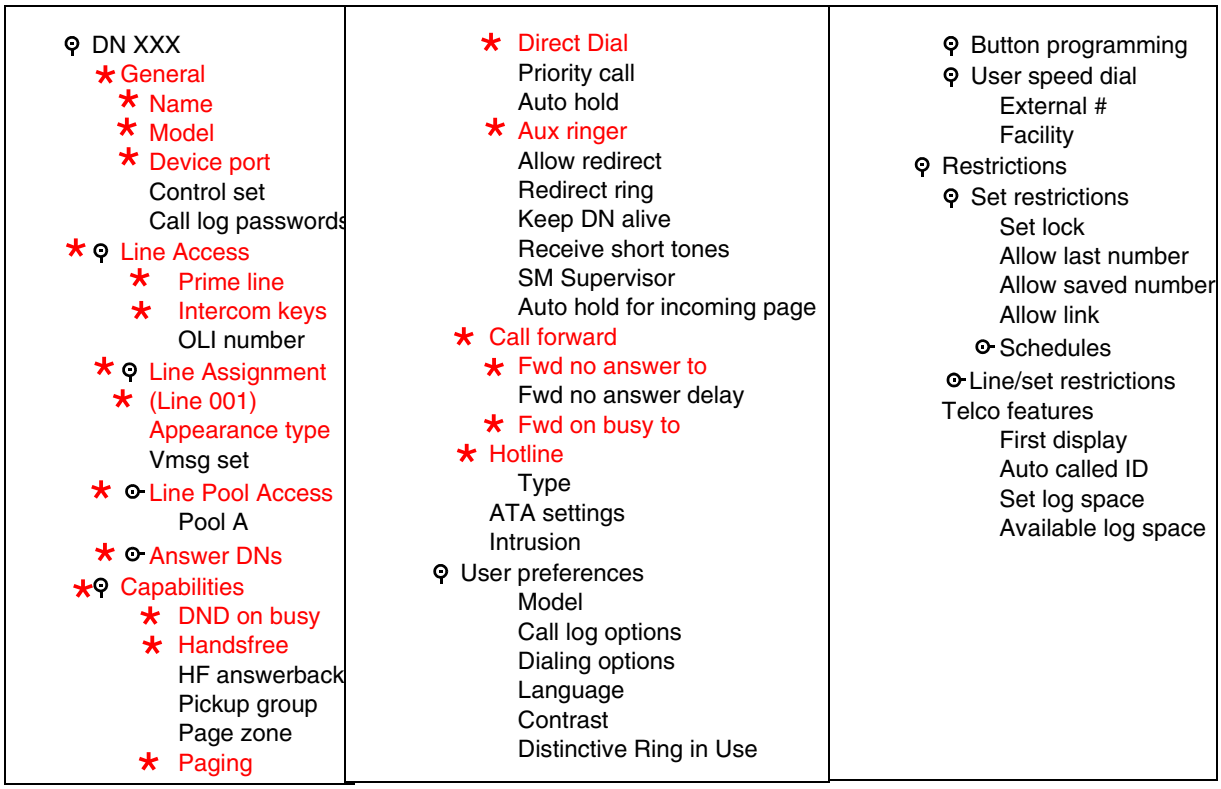
Tips: The number of Inactive DNs for digital telephones and peripherals on the Business Communications Manager are shown under the Set DNs heading.



3 Click on the Set DN record (**DN XXX**) that you want to configure for the BST Doorphone.

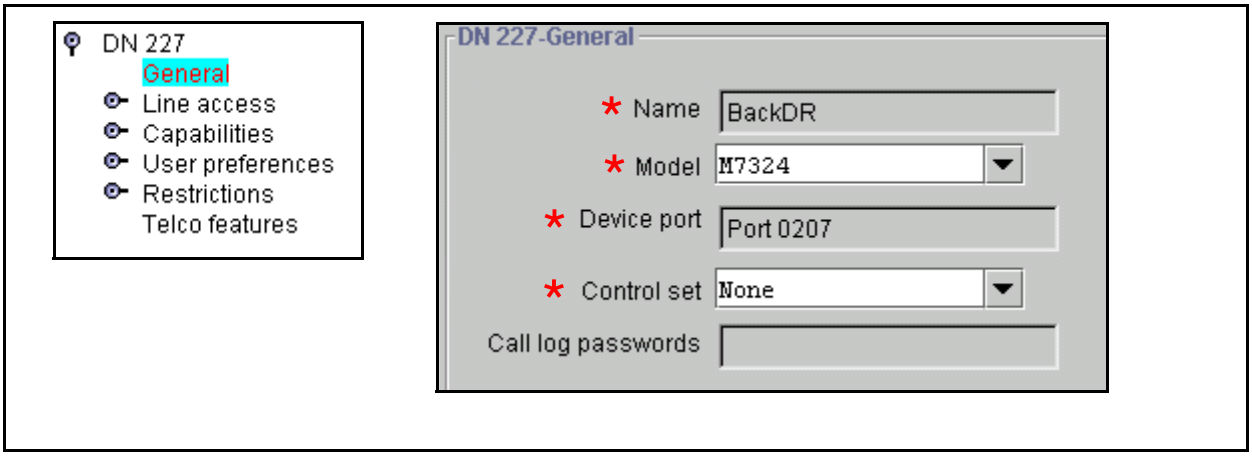
The figure below shows a detailed view of the information under the DN (DN xxx) headings. DN headings and fields that must be reviewed for BST Doorphone compatibility are shown with a red asterisk.

Figure 2 DNs headings



4 Click **General**. The **General** heading allows you to assign the name to the BST Doorphone and to view the physical port number assigned to the DN.

Figure 3 General screen example



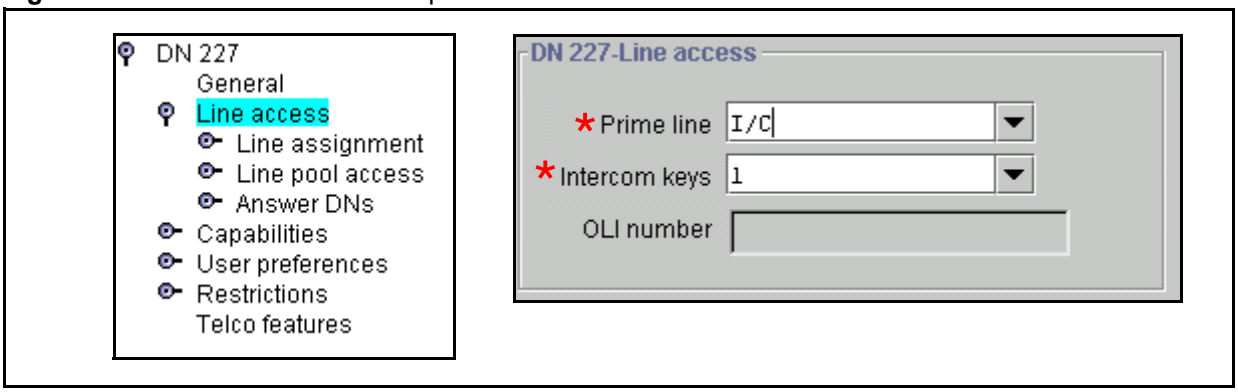
5 Four general record values must be reviewed for BST Doorphone compatibility. These settings are shown in the following table. Use this table to change general record values (if required) for the BST Doorphone.

Table 1 General record values

Attribute	Value	Description
Name	<up to seven alphanumeric characters>	Use this field to provide a more specific description of the BST Doorphone, such as BackDR for Back Door.
Model	M7324	This heading appears for telephones and peripherals in the digital DN range, which starts at the start DN (default:221) up to DN 433. Choose M7324 for the BST Doorphone.
Device port	<port number>	This read-only field shows the port number for the Set DN. Remember this port number when you are installing the BST Doorphone to a station module on the Business Communications Manager system.
Control set	None	Set this value to **None** for the BST Doorphone.
	Note: For a detailed explanation on all general record values, refer to the *Business Communications Manager Programming Operations Guide*.	

6 Click on the **Line access** heading.

Figure 4 Line access screen example



Two line access fields must be reviewed for BST Doorphone compatibility. These setting are shown in the following table. Use this table to change line access fields (if required) for the BST Doorphone.

Table 2 Line access fields

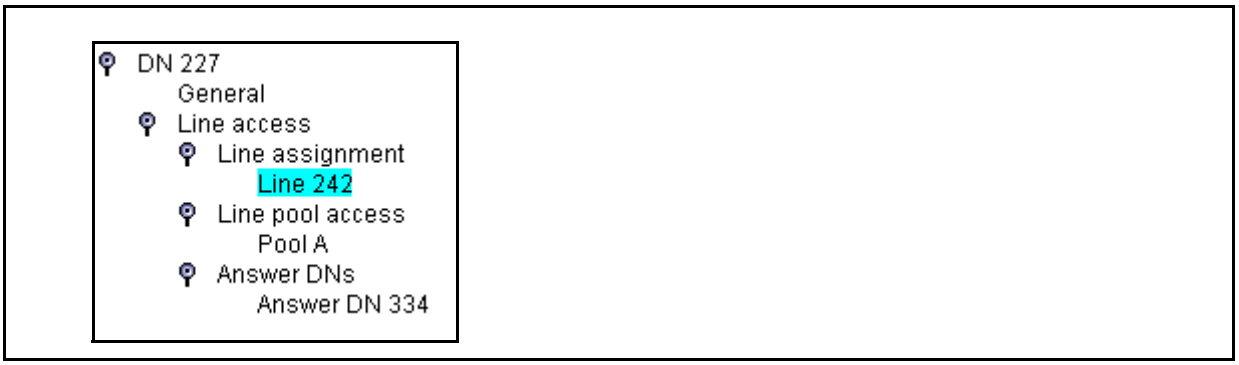
Attribute	Values	Description
Prime line	I/C	Ensure that the prime line value is set to **I/C** for the BST Doorphone.
Intercom (I/C) keys	1	Assign only one intercom key to the BST Doorphone.
	Note: For a detailed explanation on all line access fields, refer to the *Business Communications Manager Programming Operations Guide*.	

7 Click on the **Line assignment** heading and remove line assignment for this DN.

8 Click on the **Line pool access** heading and remove line pool access for this DN.

9 Click on the **Answer DNs** heading and remove Answer DNs assignments for this DN.

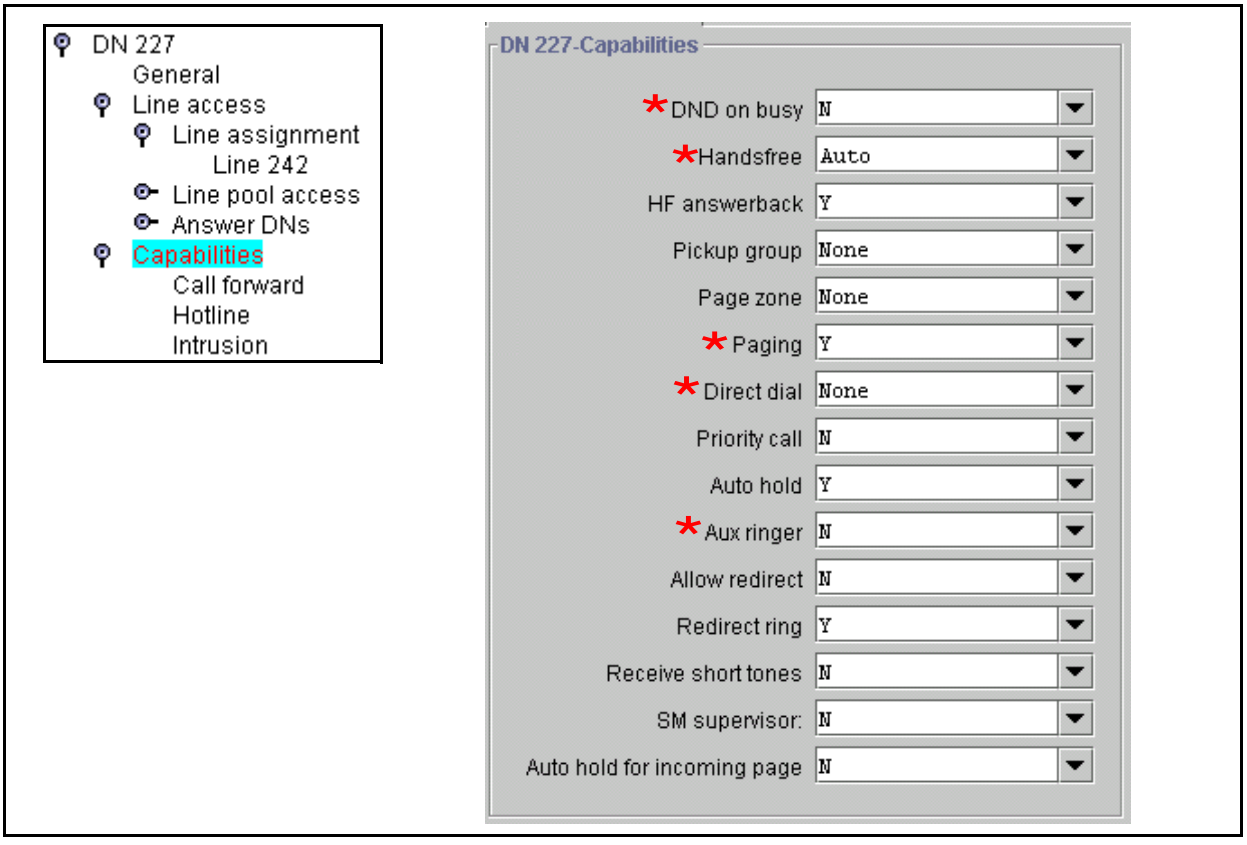
Figure 5 Line assignment, Line pool access and Answer DNs screen example



Note: Refer to the *Business Communications Manager Programming Operations Guide* for more information on how to remove lines, line pools and Answer DNs assignments on a DN record.

10 Click on the **Capabilities** heading.

Figure 6 Capabilities screen example



Five capabilities fields must be reviewed for BST Doorphone compatibility. These capabilities fields are shown in the following table. Use this table to change capabilities fields (if required) for the BST Doorphone.

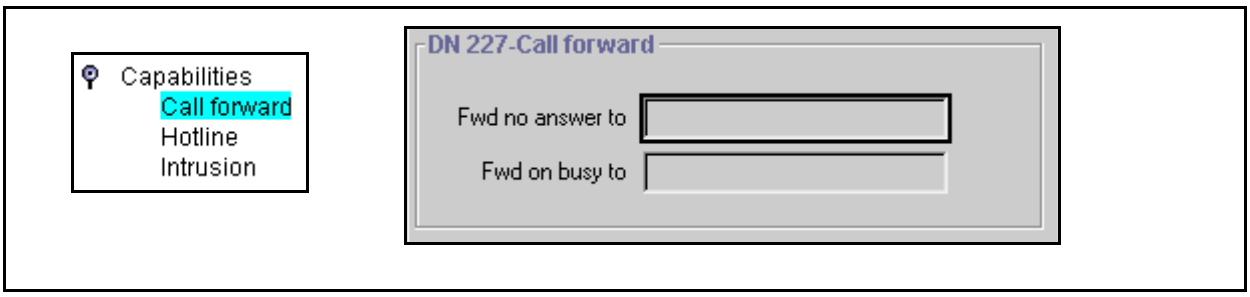
Table 3 Capabilities fields

Attribute	Values	Description
DND on busy	N or Y	Set this value to **N** (No) for the BST Doorphone.
Handsfree	Auto Standard None	Set this value to **Auto** for the BST Doorphone.
Paging	N or Y	Set this value to **Y** (Yes) for the BST Doorphone.
Direct dial	None	Set this value to **None** for the BST Doorphone.
Aux ringer	N or Y	Set this value to **N** (No) for the BST Doorphone.
	Note: For a detailed explanation on all capabilities fields, refer to the *Business Communications Manager Programming Operations Guide*.	

11 Click on the key beside **Capabilities**, then Click on **Call forward**.

Ensure that the two call forward fields (*Fwd no answer to* and *Fwd on busy to*) are **blank**

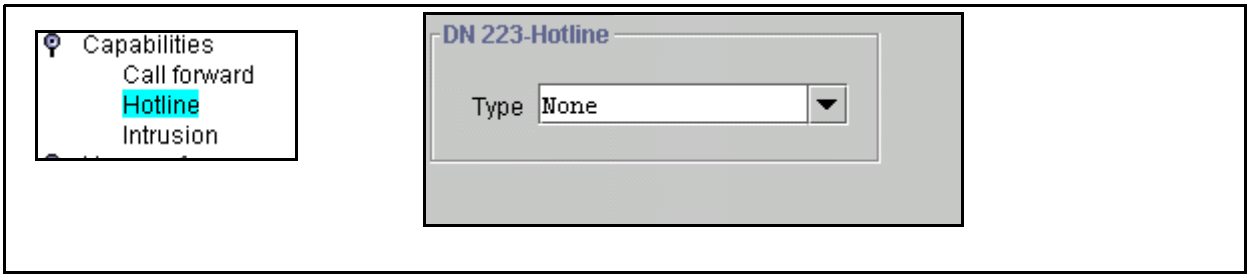
Figure 7 Call Forward screen example



12 Click on **Hotline**.

Ensure that the Hotline type is set to **None**.

Figure 8 Hotline screen example



13 Repeat the above steps for every BST Doorphone you plan to install on the system.

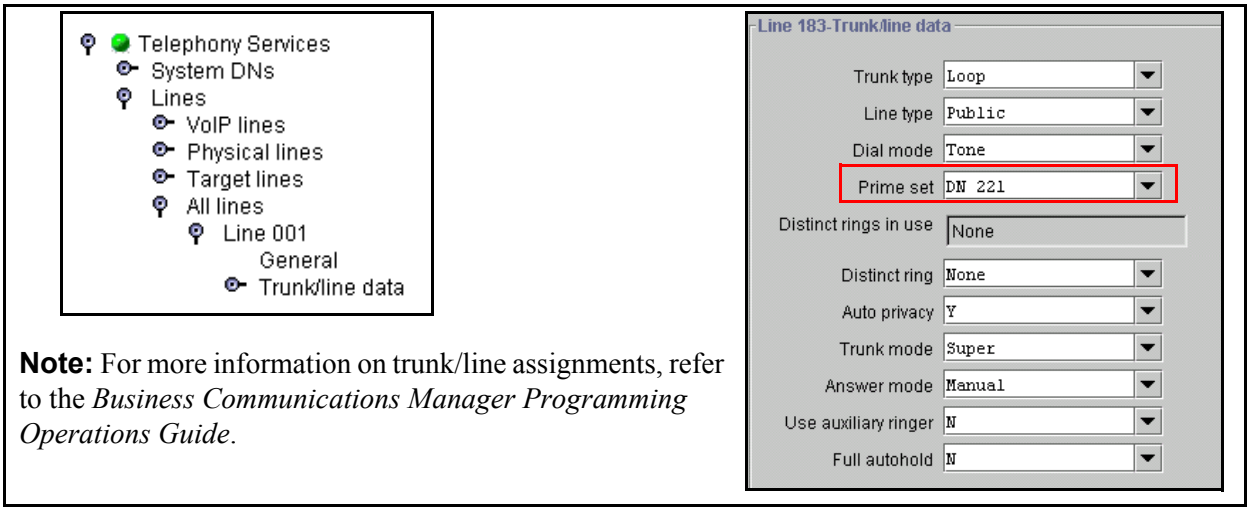
Other BST Doorphone configuration requirements

Trunk/line data

Ensure that the BST Doorphone DN (DN XXX) is not assigned as a prime set for lines on the Business Communications Manager system.

The Unified Manager displays all active lines under:
Services, Telephony Services, **Lines** and **All lines** headings.

Figure 9 Trunk/line data screen examples



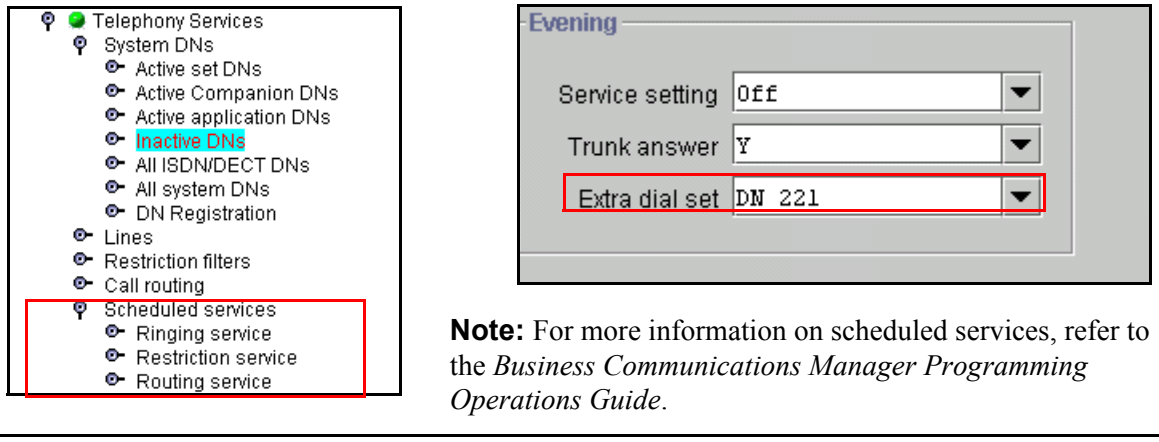
Note: For more information on trunk/line assignments, refer to the *Business Communications Manager Programming Operations Guide*.

Scheduled Services

Ensure that the BST Doorphone DN (DN XXX) is not assigned as a control set, extra dial set or a ringing set for scheduled services.

The Unified Manager displays three services (ringing, restrictions and routing) under:
Services, Telephony Services, **Scheduled services** headings.

Figure 10 Scheduled services screen examples



Note: For more information on scheduled services, refer to the *Business Communications Manager Programming Operations Guide*.

Chapter 3
BST Doorphone Installation

This chapter describes how to install a BST Doorphone and connect it to a reserved station module port on the Business Communications Manager system.

The BST Doorphone can be mounted in a standard recessed double-gang electrical box for flush mounting or surface mounted using the optional surface mount bracket. Mount the BST Doorphone at shoulder height (approximately 5 ft.) in the absence of other specifications, such as compliance with local handicapped access regulations, if required.

Select a location for the BST Doorphone within 300 m (1000 ft.) of the Business Communications Manager system. This distance can be increased to 780 m (2600 ft.) with the connection of a Station Auxiliary Power Supply (SAPS) to a BST Doorphone.

The BST Doorphone is suitable for exposure to weather; however, care must be taken to ensure holes or recesses provided for the BST Doorphone are properly sealed to prevent water from entering the wall in exposed locations. Gaskets are supplied for both flush and wall mount installations. No gasket is required between the BST Doorphone and surface mount bracket.

Caution: You must install protection devices when wiring between the BST Doorphone and the Business Communications Manager system is routed outside a building, such as aerial or buried cable. Protection devices must be installed at each end of the exposed cable. Nortel Networks recommends the ITW LINX MP1A-90-27 secondary protector for this purpose.

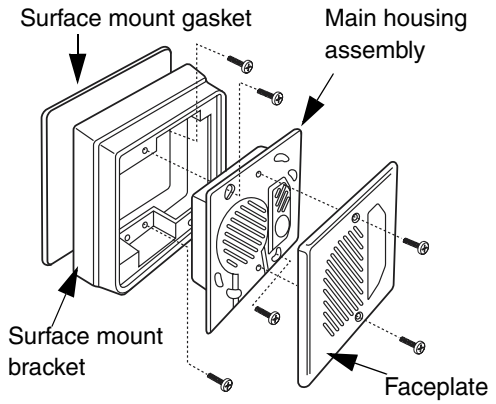
Wire and mount a BST Doorphone

1. Remove the BST Doorphone's faceplate.
2. Determine if you want a flush or surface mount installation.

   For a surface mount:

   - Discard the flush mount gasket.
   - Verify the correct orientation of the surface mount gasket.
   - Thread the wires through the center hole, then through the surface mount bracket.
   - Fasten the surface mount bracket at the desired location on the wall.

Figure 11 Surface mount

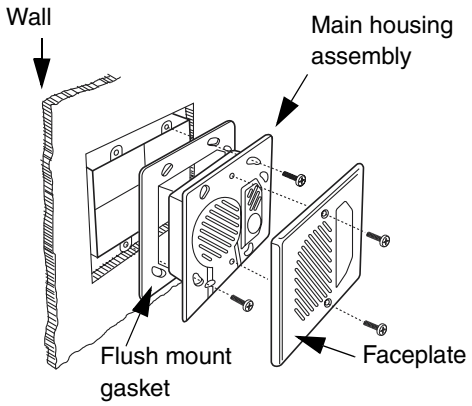


OR

For a flush mount:
(into an electrical box embedded in the wall)

- Discard the surface mount gasket and bracket.
- Slide the flush mount gasket onto the main housing assembly.

Figure 12 Flush mount



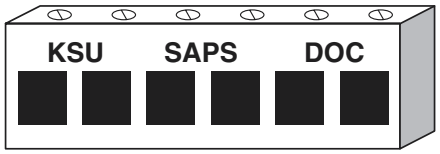
3 Run a standard 3-pair cable from the Business Communications Manager system to the BST Doorphone location.

Use one pair to connect the "KSU" terminals of the BST Doorphone to a reserved station module port on the Business Communications Manager system.

Strip wires 6 mm (1/4 inch) before inserting them in the terminal block and tightening.

The second pair can be used to connect an optional DOC, leaving a spare pair for a SAPS installation. For more information on DOC, refer to Optional Equipment on page 15.

Figure 13 BST Doorphone TCM connector screw block



Note: BST Doorphone connections are polarity insensitive.

4 Fasten the BST Doorphone's faceplate to the main housing assembly.

Note: When the surface mount bracket is used, secure the wiring with a cable tie through the round holes in the rear of the surface mount bracket or electrical box (customer supplied), before fastening the BST Doorphone's faceplate to the main housing assembly.

Initialize a new BST Doorphone

To get the system to recognize a new BST Doorphone installation, you need to perform one of the following:

- In the Unified Manager, click on **System**. Go to the top menu and click on **View**, then select **Refresh**. The Unified Manager refreshes and the allows BST Doorphones to be recognized by the system.

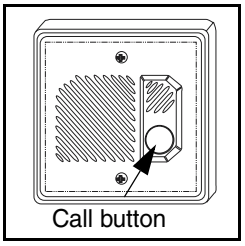
  OR

- In the Unified Manager, click on **System**. Go to the top menu and click on **Logoff**, then select **Reboot**. The system reboots and brings BST Doorphones on line.

Note: If you do a reboot, telephony services are temporarily unavailable

The BST Doorphone will identify itself to the system as a M7324 telephone.

Note: The Call button's backlight automatically turns on when the BST Doorphone is connected to a station module port on the system. The backlight is useful in low light conditions.



Optional Equipment

The Door Opening Controller (DOC) operates through a BST Doorphone to provide door opening control. The DOC receives data from the BST Doorphone, that is compared against a dip-switch set code for activation.

The DOC provides convenient control of locked mechanisms but is not intended for sole building entry security. In high security environments, backup systems should be used for added protection. Power failure, device failure, wiring faults and unauthorized equipment access can all contribute to a failed locked or unlocked situation.

For more information on the DOC, refer to documentation provided with the DOC unit.

Chapter 4
Configuring BST Doorphone settings

This chapter describes the screen that you use to configure BST Doorphone settings once you have performed the initial DN configuration and installed the unit.

Doorphone programming allows you to customize feature settings for individual BST Doorphones on the Business Communications Manager system.

Follow these steps to configure Doorphone settings:

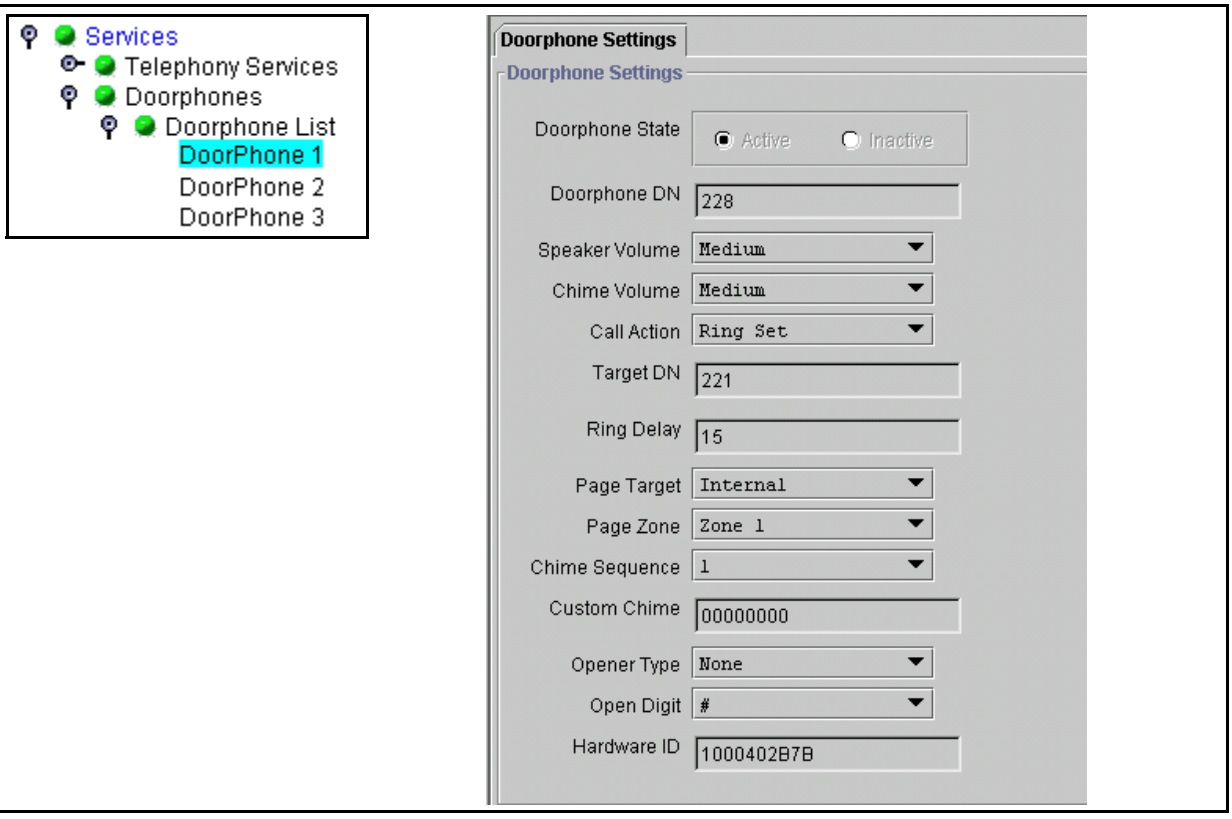
1 From Unified Manager, click on the keys beside **Services**, **Doorphones, Doorphone List**.

Tips: The number of BST Doorphones installed on the Business Communications Manager are shown under the Doorphone List heading.

A maximum of 250 BST Doorphones can be attached to the Business Communications Manager system.

2 Click on the Doorphone you want to program (for example, **Doorphone 1**).

Figure 14 Doorphone settings



3 Use the information in the following table to change the Doorphone settings.

Table 4 BST Doorphone settings

Setting	Values	Description
Doorphone state	Active Inactive	This read-only field indicates if the Doorphone is detected on the system and is operational.
Doorphone DN	<DN>	This read-only field shows the DN assigned to this Doorphone.
Speaker volume	Low Medium High	Assign a volume level for the Doorphone speaker.
Chime volume	Low Medium High	Assign a volume level for chime tones played during a Doorphone page.
Call Action	Ring Set Page Both	Select a call activity when the Doorphone Call button is pressed. **Ring Set**: Calls an internal telephone. **Page**: Sends a page tone to a specific group of telephones in a page zone. **Both**: Calls an internal telephone. If the call is not answered after a set length of time, a page tone is sent to a specific group of telephones in a page zone.
Target DN	< any telephone DN>	Enter the DN number of the internal telephone to call when the Doorphone's Call button is pressed.
Ring Delay	1 to 60 seconds	Select a set length of time (in seconds) to allow ringing at the Target DN before the call is automatically disconnected.
Page Target	Internal External Both	**Internal**: Make a page announcement to a specific group of telephones in a page zone, through the telephone speakers. **External**: Make a page announcement through an external loudspeaker system. **Both**: Make a page announcement through telephone speakers and an external loudspeaker system.
Page Zone	Zone (1 to 6) All	Assign Doorphone paging to one of six page zones. Select **All** to assign Doorphone paging to all six page zones.
Chime Sequence	1 to 4 None Custom	During a Doorphone page, a page tone will be heard followed by the distinctive chime. Select one of four standard distinctive chimes. Select **None** to have no chimes presented during a Doorphone page (only a page tone will be heard) Select **Custom** for an unique chime setting. You must enter a custom chime sequence in the Custom Chime setting.
Custom Chime	< 0 to 8 digit string>	Allows you to create your own chime tune using the following parameters: 0 to 4 - chime tone (pitch) increases by number 5 = silence
Opener Type	DOC None	Allows you to specify if a Door Opening Controller (DOC) is connected to the Doorphone.

Table 4 BST Doorphone settings (Continued)

Setting	Values	Description
Open Digit	0 - 9, * or # None < one-digit code>	The Open digit setting allows you to specify a single digit code to unlock a door or gate when a DOC is connected to the Doorphone. Select **None** to disable this setting.
	Note: The Open digit setting must match the dip-switch set code on the DOC. For more information on DOC, refer to Optional Equipment on page 15.	
Hardware ID	<10 character string>	This read-only field that shows the hardware identification number assigned to the Doorphone.

4 Repeat the above steps for each BST Doorphone installed on the system.

Testing the BST Doorphone

You can perform the following tasks to test the Doorphone settings:

- Press the Call button on the BST Doorphone and ensure the Target DN telephone rings.
- Let the Target DN telephone ring until the call is automatically disconnected. Ensure that a page tone followed by the Doorphone's distinctive chime is heard at specified telephones included in the Doorphone's page zone.
- To establish a voice path, dial the BST Doorphone's DN from any telephone on the system, or press the Call button on the BST Doorphone and answer the ringing call at the Target DN telephone.
- If installed, test the DOC as shown below:
  - Press the Call button on the BST Doorphone and answer the call at the Target DN telephone.
  - To open the door, dial the single digit code (specified in Doorphone programming) or on a two-line display telephone, press the OPEN display button.
  - Press the release button or hang up to end the test.

Doorphone configuration tips

- The Doorphone's Target DN telephone should be assigned to the same page zone that is used by the Doorphone for paging (chime presentation).
- The Doorphone can ring several telephones on the system using Answer DNs. Program one or more telephones to have a Ringing Answer button for the Target DN telephone.
  - For example, the Target DN telephone is DN 230. Assign DN 230 as an Answer DN for extensions 223, 224 and 225. When the BST Doorphone Call button is pressed, four telephones on the system will ring (telephones: 230, 222, 223 and 225).

For more information on Answer DNs and assigning telephones to page zones, refer to the *Business Communications Manager Programming Operations Guide*.